FUJIFILM

FUJI COMPUTED RADIOGRAPHY

CR Console

X-RAY CONTROL UNIT ONLINE SOFTWARE

OPERATION MANUAL

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FUJI PHOTO FILM CO., LTD.

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INTRODUCTION

This operation manual explains how to operate the X-ray Control Unit Online Software at the CR Console.
For the other functions/operations, see the "CR Console OPERATION MANUAL" and "CR Console OPERATION MANUAL, THE USER UTILITY OPERATIONS".

OPERATIONS

This software enables online transmission/reception of the setup value of X-ray exposure parameters (tube voltage, tube current, exposure time, etc.) between the CR Console and the X-ray control unit connected.

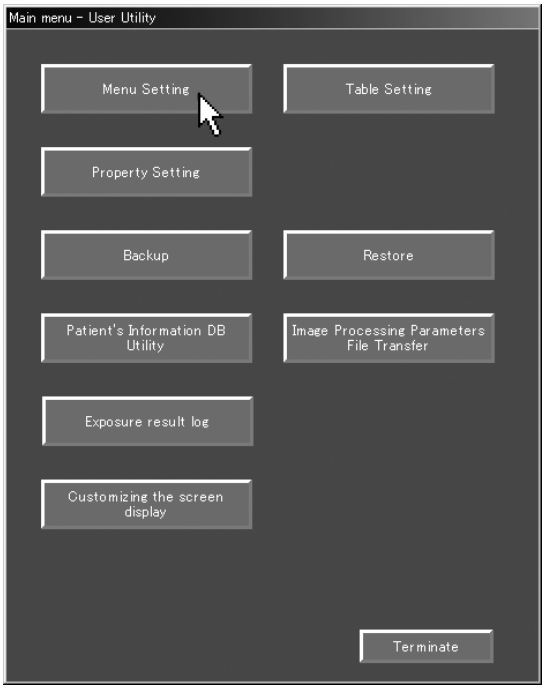
It also enables users to register/update X-ray exposure parameters for each exposure menu with the CR Console. The setup value is transmitted to the X-ray control unit by selecting an exposure menu, so that X-ray exposure parameters can automatically be set with a simple operation with the CR Console. In addition, it has the function to receive the data of X-ray exposure parameters actually used from the X-ray control unit, and the actual data can be printed on film.

■ Setting X-ray exposure parameters

Sets X-ray exposure parameters for each exposure menu.

(1) Starting up the User Utility → Selecting "Menu Setting"

Start up the User Utility and then select "Menu Setting"



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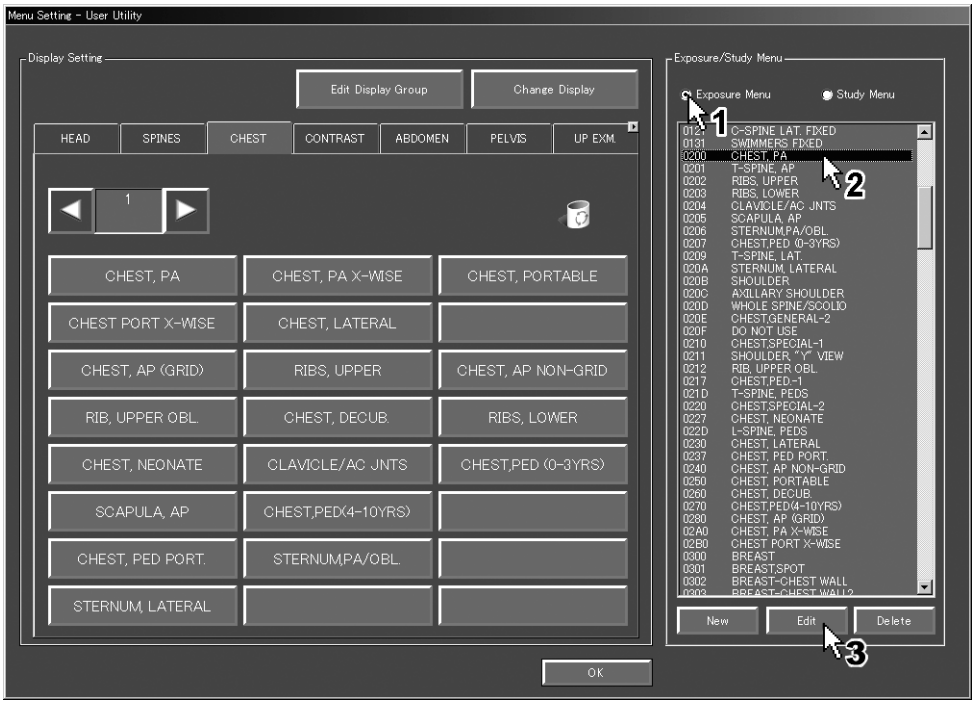
(2) Selecting exposure menu → Selecting processing

"Menu Setting - User Utility" is displayed.

List up the exposure menus, select the desired exposure menu, and then select "Edit".

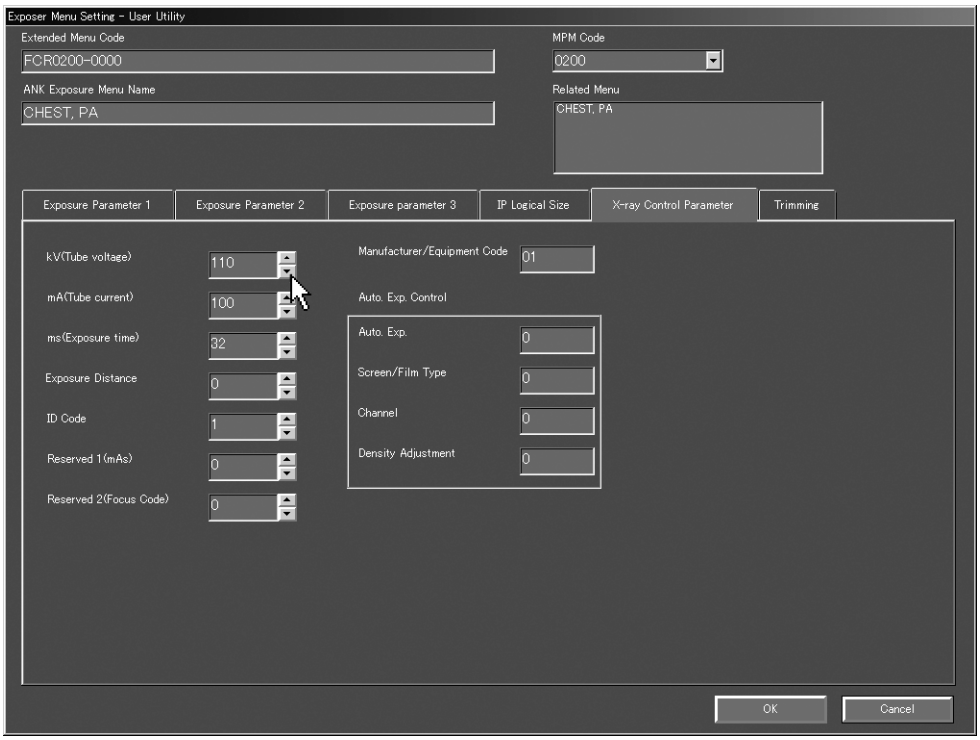


This section explains the setting for the existing exposure menus. If creating a new exposure menu (selecting "New"), the following setting can be made as well as the existing exposure menus.

(3) Setting the parameters

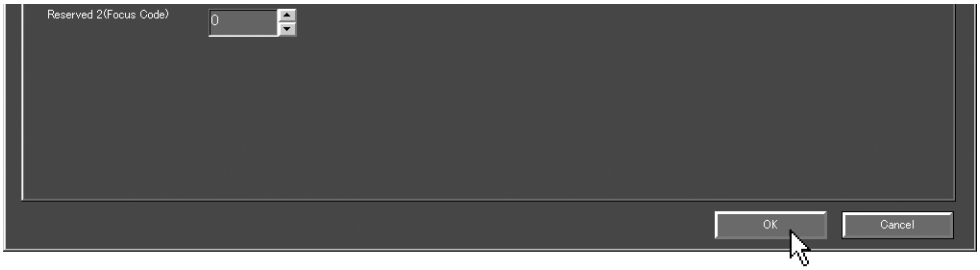
"Exposure Menu Setting - User Utility" is displayed.
Set each parameter at the "X-ray Control Parameter" folder. ("X-ray Tube/Operational Method Code" is in "Exposure Parameter 1" folder.)

(X-ray exposure parameters → page 11)



After setting the above parameters, select "OK".

("Cancel" → Cancels operation.)



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(4) Completing the setting

"Menu Setting - User Utility" is redisplayed.

To set the parameters for another exposure menu, repeat the operation steps from (2).

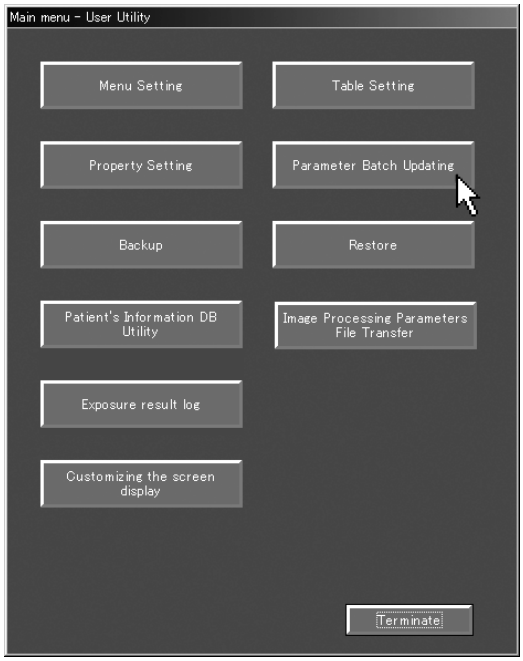
To complete the setting, select "OK" and then end the User Utility.

■ Updating X-ray Exposure Parameters of All Menus

This function enables users to update the X-ray exposure parameters for all the exposure menus at once. It is only for super users, so that general users cannot operate it.

(1) Starting up the User Utility → Selecting “Parameter Batch Updating”

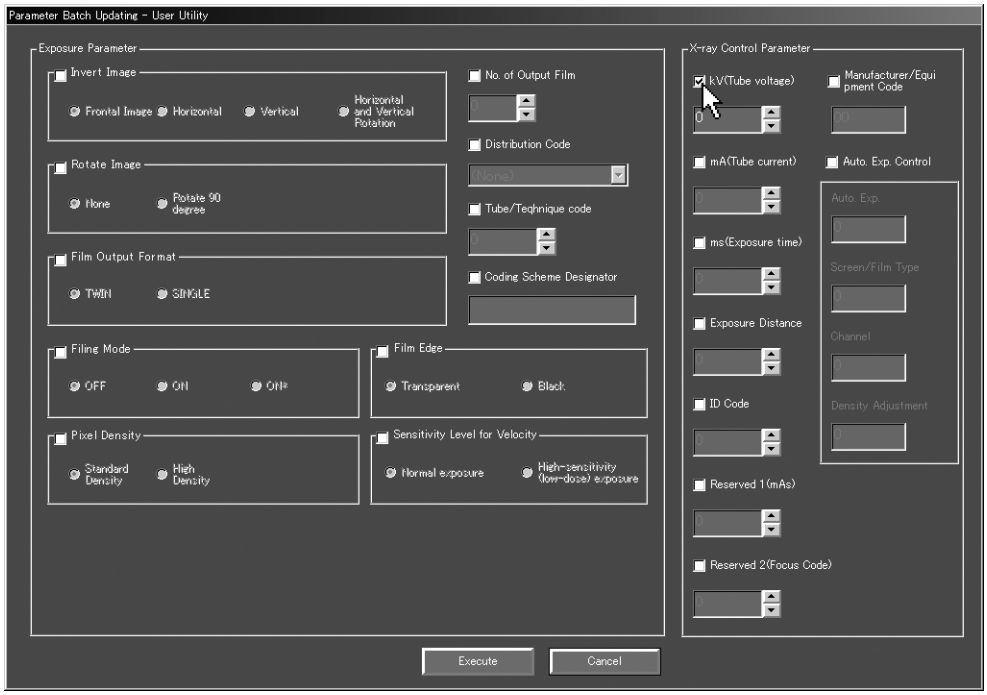
Start up the User Utility for super users, and then select “Parameter Batch Updating”.



(2) Selecting parameter

“Parameter Batch Updating - User Utility” is displayed.

Select the parameter to be updated at “X-ray Control Parameter” and put a checkmark at its checkbox. (“X-ray Tube/Operational Method Code” is in “Exposure Parameter” box.)



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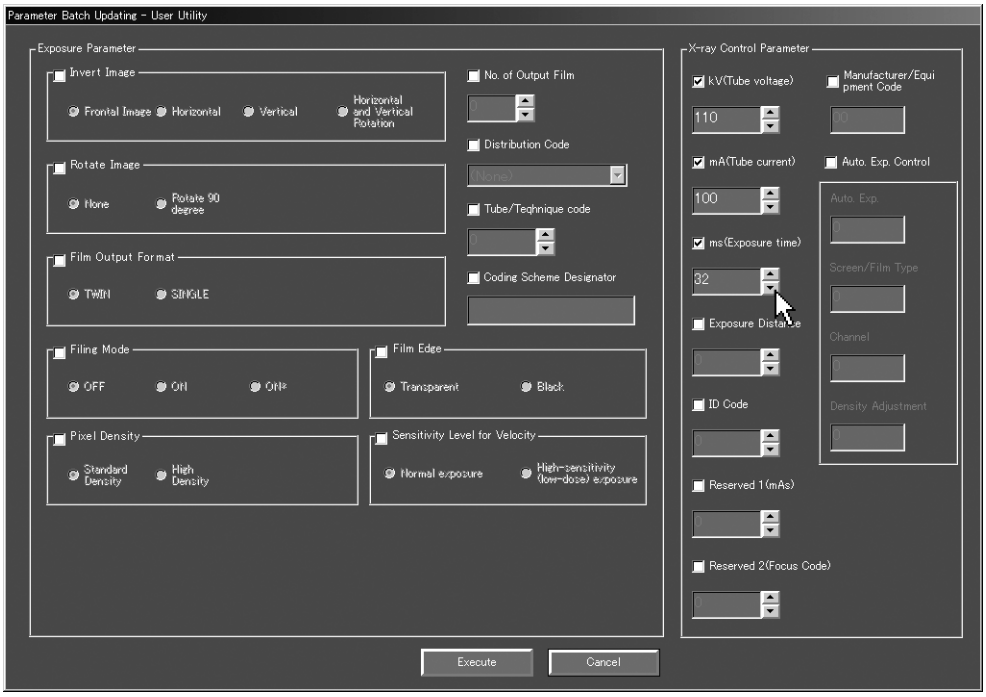
(3) Executing parameter update

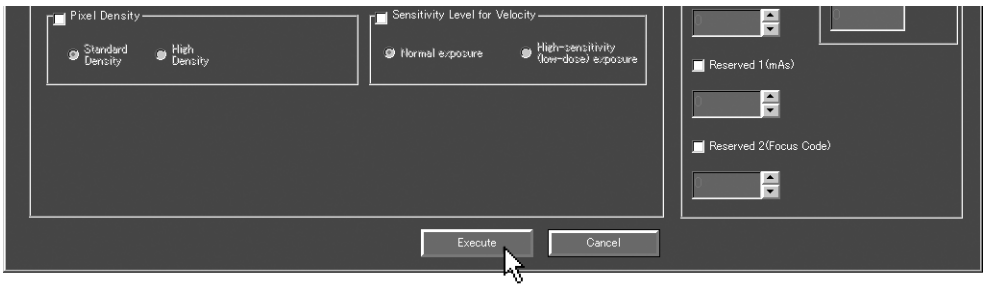
Set the check-marked parameters.

(X-ray exposure parameters → page 11)



After setting the above parameters, select "Execute".

("Cancel" → Cancels operation.)



Transmitting/Receiving the Setup Data for X-ray Exposure Parameters

No particular operation is required for transmitting/receiving the setup data of X-ray exposure parameters between the CR Console and the X-ray control unit. Perform the operation steps the same as usual to execute studies.

Transmitting X-ray exposure parameter data :
Selecting an exposure menu at the Exposure Menu Selection Screen or Study Execution Screen will transmit the setup value of the exposure parameters registered for the selected exposure menu to the X-ray exposure control unit, and the exposure parameters set automatically at the X-ray control unit. If the fine adjustment of the X-ray exposure parameters is necessary according to the object, the setting can be changed with the X-ray control unit.

Receiving X-ray exposure parameter data :
After performing exposures, the data of actual setup value of the X-ray exposure parameters are received from the X-ray control unit. The received X-ray exposure parameters are printed out when outputting images on film.

In addition, when exposures are performed in succession in such cases as split exposure, the X-ray exposure parameters are transmitted from the X-ray control unit for each occasion, so that the CR Console adds “multiplication value of X-ray Tube Voltage by Duration of X-ray Radiation” of the X-ray exposure parameters and print out this value on film.

NOTE

- In case of transmitting the setup data for X-ray exposure parameters, when the data (tube current, tube voltage, exposure time and others) are out of the preset-value range, the message indicating this will be displayed. Then, the data is modified within the range automatically and will be transmitted. In this case, confirm/change the setup data for X-ray exposure parameters for each exposure menu at the User Utility.

– X-ray exposure parameters –

There are the following two types for automatic setting of X-ray exposure parameters depending on the method of setting tube voltage/exposure time/tube current.

- Parameters of tube voltage/exposure time/tube current are transmitted from the CR Console, and the parameters are set as they are at the X-ray control unit.
- ID cord is transmitted from the CR Console, and the parameters of tube voltage/exposure time/tube current are set based on the transmitted ID cord at the X-ray control unit.

As shown above, transmissions are made either with the parameters of "kV (Tube voltage)"/ "ms (Exposure time)"/"mA (Tube current)" enabled or the parameter of "ID Code" enabled. Check which type is applicable before setting each parameter.

The following describes each parameter.

In each parameter, range and value of the setting differ depending on the type of the connected X-ray control unit. Check details of the model before setting.

kV (Tube voltage) **:** Set X-ray tube voltage.
mA (Tube current) **:** Set X-ray tube current.
ms (Exposure time) **:** Set exposure time.
Exposure Distance **:** Set exposure distance.
ID Code **:** Set a code to set tube voltage/exposure time/tube current at the X-ray control unit.
Reserved 1 (mAs) **:** Set a mAs value.
Reserved 2 (Focus code) **:** Set a focus code.
Manufacturer/Equipment code **:** Set a code for the X-ray control unit.
Auto. Exp. Control **:** Set the items to control the auto-exposure. Each item differs depending on the application of the X-ray control unit.
X-ray Tube/Operation Method Code **:** Set a code for X-ray tube/operation method.

NOTE

- Be careful to set each value not to excess the necessary X-ray exposure dose to patients.

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